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AMSAT NEWS SERVICE
ANS-342

ANS is a free, weekly, news and information service of AMSAT North America, The
Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

In this edition:
* AO-16 Requires Several Restarts
* ARISS 25th Commemorative Event to Feature 9K6 Packet This Week
* Sumbandilasat to be Launch from Baikonur
* ARISS Status - 01 December 2008

SB SAT @ AMSAT $ANS-342.01
AO-16 Requires Several Restarts

AMSAT News Service Bulletin 342.01
  From AMSAT HQ SILVER SPRING, MD.
December 7, 2008
To All RADIO AMATEURS
BID: $ANS-342.01

AO-16 Command Station, Mark N8MH reported this week, "As expected, over the last few days AO-16 has started to again experience 'shutdowns'. So far I've restarted the bird three times, and each time it appears to stay up for a day or more. We can expect the situation to worsen, as the eclipse periods get longer and the satellite temperatures continue to go down. We've been warning you, get those AO-16 contacts in now!"

Mark says he will try to restart AO-16 as long as possible when his schedule allows him. Satellite operator reports to the OSCAR Satellite Status page by KD5QGR at http://oscar.dcarr.org/ are very helpful.

Mark continues, "If the birds is operational in voice mode, you should clearly hear the "not-so-repressed carrier" on the downlink. I have a special request - if you do not hear the carrier, please do not transmit to AO-16, as your transmissions make it difficult to command the satellite.   And, if you hear the "hummmming" of the PSK transmitting, again please do not attempt to transmit to the bird; it's likely that I have restarted the bird and need to collect tele-metry before configuring it into voice mode. Thanks to all you faith-ful AO-16 operators!"

Current operational mode for AO-16 (as available!):

Mode FM Voice Repeater (Downlink is DSB)
Uplink : 145.9200 MHz FM
Downlink 437.0260 MHz SSB

[ANS thanks Mark, N8MH for the above information]

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SB SAT @ AMSAT $ANS-342.02
ARISS 25th Commemorative Event to Feature 9K6 Packet This Week

AMSAT News Service Bulletin 342.02
  From AMSAT HQ SILVER SPRING, MD.
December 7, 2008
To All RADIO AMATEURS
BID: $ANS-342.02

As promised by ARISS, the 25th Anniversary Commemorative radio event started operations from the ISS amateur radio station this week. Early in the week several amateur stations around the world were able to copy the slow-scan television (SSTV) pictures transmitted from the ISS. On Friday, December 5 the ARISS crossband FM repeater was enabled with several stations reporting excellent signals. When the crossband repeater is operational its uplink is on 437.800 MHz FM with its downlink on 145.800 MHz FM. Remember to adjust for doppler shift when operating in this mode.

For the week of December 7-12 ARISS will run a test of 9600 baud packet operations on the simplex frequency 145.825 MHz.

To celebrate our 25 years of amateur radio operations from space, the ARISS team has planned a set of special event opportunities during the month of December and part of January. A special certificate is being developed for those who communicate with the ISS, either 2-way direct (with the ISS crew,the digipeater, or cross band repeater), or 1-way reception of SSTV or voice downlink. Several "surprises" planned over the month-long celebration. The surprises will be announced once ARISS is pre-positioned to accomplish them.

ARISS reminds everyone that ISS flight requirements related to EVA and vehicle activity may require the radio to be off for some portion of this schedule. And school contacts and general QSO opportunities by the crew will also preempt this schedule for short periods of time. But remember that if you hear these, you still qualify for a commemorative certificate.

[ANS thanks Frank, KA3HDO, AMSAT-NA V.P. for Human Spaceflight Programs
  and ARISS International Chairman for the above information]

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SB SAT @ AMSAT $ANS-342.03
Sumbandilasat to be Launch from Baikonur

AMSAT News Service Bulletin 342.03
  From AMSAT HQ SILVER SPRING, MD.
December 7, 2008
To All RADIO AMATEURS
BID: $ANS-342.03

It is official! South Africa's second satellite, SumbandilaSat, will be launched
from the Russian Baikonur Cosmodrome in the December to March time frame.

SumbandilaSat has been unpacked and is undergoing testing at SunSpace in Stellenbosch before it will be shipped to Russia for integration with

the launch
vehicle. Engineers at the launch site are preparing a special adapter ring
to
accommodate the Sumbandila structure on the rocket.

"Sumbandila" means showing or pointing the way. Freely translated into
English
"Pathfinder"

The Amateur Radio Payload will be operating in conjunction with the
University
of Stellenbosch Software Defined Receiver project as it will share the VHF
receiver and UHF transmitter used by the SDR project.

SA AMSAT has designed and built a control system to facilitate the following
operations:

   * V/U voice transponder with an uplink in the 2 metre band and a
downlink in
      the 70cm band.

   * A parrot repeater (voice digipeater)

   * A voice beacon

The control unit will command the various function of the transponder
and handle
the parrot and beacon messaging. On receipt of a tone from the VUCU VHF
receiver, the CTCSS tone will be decoded and depending on the tone received
the
unit will command the VU transponder operation or the parrot repeater. In
the
transponder mode the satellite will act like a cross-band FM repeater and
allow
two way communications with other stations on the ground.

If the tone received indicates parrot operation, the interface unit will
record
20 seconds of audio on its VHF uplink receiver and replay the recorded audio
on
the UHF downlink.

Should, for a predetermined period, there be no tones received, the
controller
will initiate a voice beacon, transmitting a pre-recorded message at regular
intervals.   This facility will offer many opportunities for educational
projects.

[ANS thanks SA AMSAT for the above information]

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SB SAT @ AMSAT $ANS-342.04
ARISS Status - 01 December 2008

AMSAT News Service Bulletin 342.04
  From AMSAT HQ SILVER SPRING, MD.
December 7, 2008
To All RADIO AMATEURS
BID: $ANS-342.04

1. Upcoming School Contacts

An Amateur Radio on the International Space Station (ARISS) contact has been scheduled with Ellis School in Belleville, Illinois on Monday, December 8 at 16:54 UTC. Space studies have been integrated into the school curriculum. Students have created solar system models, written reports and given presentations to their classes. They have designed rockets and given talks to the class about where the rockets will go and what they will do in space. They have planned space colonies and determined how the astronauts will travel, how they will obtain food and where they will live. They have also sampled space food. Students have learned about Expedition 18, the Space Shuttle, the international partners and the ISS and amateur radio. The class is currently growing seeds that were flown in space.

An Amateur Radio on the International Space Station (ARISS) contact has been scheduled for Stephen F. Austin Elementary School in Richmond, Texas on Tuesday, December 9 at 15:43 UTC. Students have studied space and the identifying characteristics of objects in our solar system including the sun, planets, and moon. Each year the 5th grade students participate in a simulated space shuttle mission, performing tasks that would happen on a regular shuttle flight. Each grade level is involved in some manner with the various missions that occur throughout the day. The school has integrated the ARISS contact as part of this activity.

The Istituto Comprensivo "Marco Polo," in Grado, Italy has been scheduled for an Amateur Radio on the International Space Station (ARISS) contact on Wednesday, December 10 at 10:08 UTC.

An Amateur Radio on the International Space Station (ARISS) contact has been scheduled with 2 Circolo Didattico San Giuseppe in Mola di Bari, Bari, Italy on Friday, December 12 at 14:14 UTC. Lesson plans have been developed for students that cover amateur radio and space missions. Newspapers, radio and television, both local and regional, will report on the event.

2. New Zealand Homeschoolers Experience ARISS Contact

Wairarapa Home School Association students from Carterton, Wairarapa, New Zealand participated in an Amateur Radio on the International Space Station (ARISS) contact on Wednesday, November 26 via telebridge stations VK5ZAI and VK4KHZ, both in Australia. Mike Fincke, KE5AIT, answered all 15 questions asked. The audio was available on EchoLink and Internet Radio Linking Project (IRLP). This was the second ARISS contact performed with New Zealand students.

3. Video of ARISS - International Education Week Contact

Students from Poolesville, Maryland, Raleigh, North Carolina and Quito,

Ecuador
experienced a joint Amateur Radio on the International Space Station (ARISS) contact on Friday, November 14 as part of International Education Week (IEW).
A video of the participating students from North Carolina and Ecuador has been
posted to YouTube. See: http://www.youtube.com/watch?v=6d3D66DbBEo

4. CQ VHF Article on ARISS Meetings

Amateur Radio on the International Space Station (ARISS) member Keith Pugh, W5IU, wrote an article for the Fall 2008 issue of CQ VHF which covered the ARISS
meetings held in Moscow during July 2008. An excerpt from the article may be viewed here: http://www.cq-vhf.com/Fall08Sat.html

5. ARISS Commemorative Event

Twenty-five years ago, Owen Garriott, W5LFL, became the first amateur radio operator to talk to hams from space on the STS-9 Space Shuttle Columbia mission
which was launched on November 28 and landed on December 8, 1983. To celebrate
this event, an Amateur Radio on the International Space Station (ARISS) commemorative event will be held during the month of December through early January. A special certificate is being developed for those who communicate with the ISS, either 2-way direct (with the ISS crew, the digipeater, or cross
band repeater), or 1-way reception of SSTV or voice downlink. For more details,
see: http://www.ariss-eu.org/2008_11_30.htm

[ANS thanks Carol, KB3LKI, for the above information]

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In addition to regular membership, AMSAT offers membership in the President's
Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are
available from the AMSAT Office.

73,
This week's ANS Editor,
Lee McLamb, KU4OS